

*Buy U. S. War Savings Bonds and Stamps*

# GEOGRAPHIC SCHOOL BULLETINS

*Published Weekly by*

**THE NATIONAL GEOGRAPHIC SOCIETY**

(The National Geographic Society is a scientific and educational Society, wholly altruistic, incorporated as a non-commercial institution for the increase of geographic knowledge and its popular diffusion. General Headquarters, Washington, D. C.)

The GEOGRAPHIC SCHOOL BULLETINS, because of Government restrictions on paper, face a limit on subscriptions. If you receive a renewal blank with this issue, we suggest that you renew at once. If your associates wish to subscribe, advise them to do so promptly.

## Contents for Week of February 15, 1943. Vol. XXI. No. 30.

1. Casablanca, Conference City, Is North Africa's New York *Roy*
2. The People of Pacified Papua, New Guinea's Southeast Quarter *Burnett*
3. Geo-Graphic Brevities *Hoopes, Burnett, Kilian*
4. Subject Index to GEOGRAPHIC SCHOOL BULLETINS, Volume XXI



*E. W. Brandes*

### HALF-PINT-SIZE PAPUAN TREE-DWELLERS HUNT TEN-GALLON-SIZE BIRDS

In Papua, the southeast section of New Guinea, birds grow large and men grow small. Tree-dwelling pygmies of the interior may be no more than four feet high, and they hunt the cassowary, among the world's largest birds, sometimes five feet in height. The bird, in addition to meat, is valued also for its breastbone and claws, which can be carved into murderously sharp tips for arrows. Now that American soldiers have cleaned the Japanese out of Papua, they may get acquainted with their strange native neighbors (Bulletin No. 2).

### HOW TEACHERS MAY OBTAIN THE BULLETINS

The Geographic School Bulletins are published weekly throughout the school year (thirty issues) and will be mailed to teachers in the United States and its possessions for one year upon receipt of 25 cents (stamps or money order); in Canada, 50 cents. Entered as second-class matter, Jan. 27, 1922, Post Office, Washington, D. C., under act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in section 1103, Act of Oct. 3, 1917, authorized Feb. 9, 1922. Copyright, 1943, by National Geographic Society, Washington, D. C. International copyright secured. All rights reserved. Quedan reservados todos los derechos.

*Buy U. S. War Savings Bonds and Stamps*

# GEOGRAPHIC SCHOOL BULLETINS

*Published Weekly by*

**THE NATIONAL GEOGRAPHIC SOCIETY**

(The National Geographic Society is a scientific and educational Society, wholly altruistic, incorporated as a non-commercial institution for the increase of geographic knowledge and its popular diffusion. General Headquarters, Washington, D. C.)

The GEOGRAPHIC SCHOOL BULLETINS, because of Government restrictions on paper, face a limit on subscriptions. If you receive a renewal blank with this issue, we suggest that you renew at once. If your associates wish to subscribe, advise them to do so promptly.

## Contents for Week of February 15, 1943. Vol. XXI. No. 30.

1. Casablanca, Conference City, Is North Africa's New York *Roy*
2. The People of Pacified Papua, New Guinea's Southeast Quarter *Burnett*
3. Geo-Graphic Brevities *Hoopes, Burnett, Kilian*
4. Subject Index to GEOGRAPHIC SCHOOL BULLETINS, Volume XXI



*E. W. Brandes*

### HALF-PINT-SIZE PAPUAN TREE-DWELLERS HUNT TEN-GALLON-SIZE BIRDS

In Papua, the southeast section of New Guinea, birds grow large and men grow small. Tree-dwelling pygmies of the interior may be no more than four feet high, and they hunt the cassowary, among the world's largest birds, sometimes five feet in height. The bird, in addition to meat, is valued also for its breastbone and claws, which can be carved into murderously sharp tips for arrows. Now that American soldiers have cleaned the Japanese out of Papua, they may get acquainted with their strange native neighbors (Bulletin No. 2).

### HOW TEACHERS MAY OBTAIN THE BULLETINS

The Geographic School Bulletins are published weekly throughout the school year (thirty issues) and will be mailed to teachers in the United States and its possessions for one year upon receipt of 25 cents (stamps or money order); in Canada, 50 cents. Entered as second-class matter, Jan. 27, 1922, Post Office, Washington, D. C., under act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in section 1103, Act of Oct. 3, 1917, authorized Feb. 9, 1922. Copyright, 1943, by National Geographic Society, Washington, D. C. International copyright secured. All rights reserved. Quedan reservados todos los derechos.



# GEOGRAPHIC SCHOOL BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)  
General Headquarters, Washington, D. C.

## Casablanca, Conference City, Is North Africa's New York

**S**MELLY, crowded *souks* and camels clumping through narrow streets—features of the popular notion of a Moslem city in Africa—definitely do not belong in the picture of Morocco's Casablanca, where President Roosevelt and Prime Minister Churchill met for their "Unconditional Surrender" conference.

One of the fastest-growing cities of Africa, most of Casablanca is nearly brand new, built under French supervision in the past thirty years. It has broad boulevards with palm-shaded green parkways between the traffic lanes. It has modernistic hotels twelve stories high, topped with penthouses. It has rambling suburbs of white and yellow stucco villas. It even has an ocean boulevard, a broad highway along the high bluff overlooking the blue Atlantic.

### Birthplace of French Power in Morocco

This is the largest city of French North Africa, recently having surpassed Algiers after a neck-and-neck expansion for several years. An official census in 1936 gave Casablanca 257,000 people, and since then visitors to the seaside African metropolis have grumbled that the population must have been doubled by refugees from war in Europe. Europeans comprise at least a third of the people.

The finest Atlantic port north of Dakar, Casablanca in many ways deserves the title of North Africa's New York. Railways and highways through the French colonies reach to the port, there to swap commerce with the shipping lines that a peacetime world hopefully established.

The port, now the African anchor of supply lifelines reaching across the Atlantic to United States forces in North Africa, is entirely artificial. Forty years ago Africa's straight Atlantic coastline showed a couple of grudging dents at Casablanca's waterfront. Gigantic breakwaters now shelter 350 acres of anchorage suitable for the largest vessels. In harbor improvements alone the French have gambled 65 million dollars on Casablanca's commercial future.

This harbor was the threshold over which France advanced to power in Morocco. For nearly twelve hundred turbulent years an independent kingdom, Morocco was still resisting Europeans at the beginning of this century. Reluctantly the Sultan agreed to permit the French to establish a port at the insignificant Arab town of Casablanca. Workmen on the harbor improvements were attacked by hostile Moroccans on July 30, 1907, and there began a fray that finally brought a French fleet to shell the town into a shambles and a detachment of French troops to occupy the ruins.

### Morocco's "White House" Is Older than Washington's

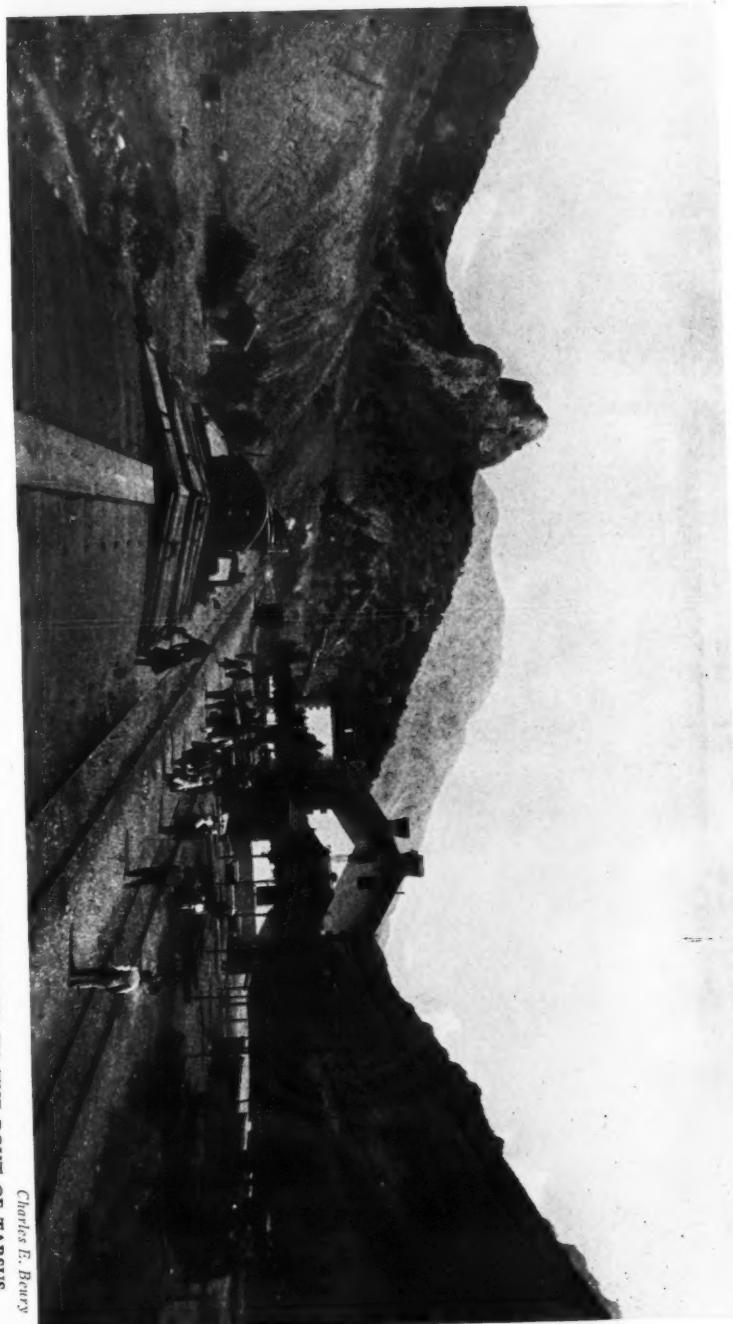
Upon the wreckage of the captured town the French raised a white and shining city with such American-like speed that they borrowed an American word to describe it—"rush." The rush of modernizing has even clipped the city's name to an affectionate and abbreviated "Casa" among the inhabitants.

Casablanca is Spanish for "White House," a name traced to earlier occasions when the town was razed and rebuilt, shining and new.

Some historians wonder whether the city's earlier name—Anfa—might not identify it as a trading port established by a Phoenician Columbus, the historic Hanno who skirted Africa's Atlantic shores as far as Liberia.

In the mid-stretches of its history, while still Anfa, Casablanca was the home

Bulletin No. 1, February 15, 1943 (over).



*Charles E. Beury*

FREIGHT TRAINS TRAVEL THROUGH THE ROCKY GATE WHICH ONCE WAS ALEXANDER'S ROUTE TO THE ROUT OF TARSUS

This freight train of the Baghdad Railway, pushing its way northwest from Iraq and the Levant States border across heavily forested southern Turkey, is headed for the Cilician Gate through the Toros (Taurus) Mountains. Completed in 1908, this section of the Baghdad Railway cuts the northeast corner of the Mediterranean coastal plain and utilizes the rocky pass through which Alexander the Great marched his army to capture Tarsus, in 333 B.C. The railway serves the chrome mines of the region and helps transport manganese from the deposits in the Eregli area. Chestnut trees from these coastward slopes of the Toros range furnish ties for the railroad. Oak and walnut trees supply building lumber, which is floated down the Seyhan River from the forests and shipped to Egypt and Syria (Bulletin No. 5).

# GEOGRAPHIC SCHOOL BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)  
General Headquarters, Washington, D. C.

## The People of Pacified Papua, New Guinea's Southeast Quarter

AFTER the long-drawn-out cleaning up of Buna, Allied forces on New Guinea have announced that in Papua at least—the southeastern quarter of that giant South Seas island—there is no more fighting.

Papua is that portion of New Guinea directly under Australia's rule. It stretches from the hilly eastern tip of the huge island almost 800 miles before it meets the east boundary of Netherlands New Guinea, the island's western half.

### Named for Natives' Frizzled Hair

The western section of Papua's 90,000 square miles is separated from Northeast New Guinea (a mandated territory, formerly German, under Australia's supervision since World War I) by a long and almost unbroken chain of mountain ranges.

The eastern section of Papua reaches from coast to coast, tapering Australia-ward to New Guinea's southeastermost tip. The Owen Stanley Mountains, rain-soaked heights over which the Allies so recently pushed back the Japs, make a rugged spine across tapering Papua, rising between the Buna-Gona area and Port Moresby, the government center for Australia's administration of the territory.

Papua was the name which once applied to the entire island of New Guinea. It comes from the Malay *papuwah*, meaning "frizzled," and was given to the island by an early explorer when he first saw the bushy-haired natives centuries ago.

Gold and the promise of oil once lured many early explorers into the heart of Papua, but more recently strict government regulations and a general "hands-off" policy regarding the natives have kept most white men out.

American soldiers now stationed in Papua, though equipped with a meager handful of native jargon, might find the going pretty tough in the tree-tangled jungle of the Papuan bushman's bailiwick. Civilization has touched the lives of natives living along the coasts, but the bushman of the interior still clings to age-old customs of his ancestors.

### Most Houses on Stilts, Some "Skyscrapers" in Trees

It is in some of these more remote reaches, where government control is not yet wholly accepted, that natives still go on occasional head-hunting sprees.

Inland Papuans launch canoes with a ceremonial sprinkling of human blood. A dash of the same over a new house shows that the house is officially open.

A native may signify his grief and mourning by lopping off a joint of one of his fingers. White instead of black is a mourning color. A widow may mourn her husband's death by smearing her entire body with white pipe clay.

Natives of one village often cannot understand the dialect of the neighboring village, even though the settlements may be within an over-the-back-fence conversation distance. In coastal towns, use of pidgin English is fairly widespread.

A pig is a very important thing in the life of a Papuan. It is both a food and a symbol of friendship—and all too frequently the cause of tribal feuds. The wedding "cake" at a Papuan marriage is most likely to be a pig, and the bride's dowry consists of pigs. A good host gives guests a hunk of pork to take home.

Although architecture varies from village to village, a great number of the native houses, especially along the coast, are built on stilts. The "ground" floor is just ground. It is frequently given over to the pigs and dogs.

port of pirates, whose looting eventually brought reprisal to the town from the angry Portuguese in 1465. Determined to wipe out the sea raiders, the Portuguese destroyed old Anfa a century later, then rebuilt it as Casa Branca (White House). The Moroccan Sultan who rescued it from Europeans in 1757 christened it with the same name in Arabic, Dar-el-Baida. Spanish merchants in the 19th century called it Casablanca. So Morocco had a White House in three languages long before the "President's Palace" in the United States received the title.

About 3,600 miles across the Atlantic from New York City, Casablanca is in the southern latitudes of Charleston, South Carolina, and Atlanta, Georgia.

Note: Casablanca may be located on the National Geographic Society's Map of Africa, which was issued as a supplement to the February, 1943, issue of the *National Geographic Magazine*. A price list of maps may be obtained from the headquarters of the Society in Washington, D. C.

For further information, see these articles in the *National Geographic Magazine*: "Eastward from Gibraltar," January, 1943; and "Across French and Spanish Morocco," March, 1925; and these GEOGRAPHIC SCHOOL BULLETINS: "Thumbnail Gazetteer of Embattled French North Africa," November 30, 1942; and "French Northwest Africa Approaches Size of U. S.," May 5, 1942.

Bulletin No. 1, February 15, 1943.



E. Michaud

#### IN A FRENCH SETTING, A MOORISH FINGER POINTS OUT THAT TIMES CHANGE

The Place de France is the central square from which Casablanca's main streets radiate like wheel spokes. In keeping with its French name, it is surrounded by fine French hotels and office buildings. But reminders of the African locale are the palm trees and the Moorish-style clock tower. Bright with tile designs and airy with Moorish arches, this tower appears deceptively old. Though antedating its surroundings, it was built in 1910 by a Frenchman.

# GEOGRAPHIC SCHOOL BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)  
General Headquarters, Washington, D. C.

## Geo-Graphic Brevities

### LORIENT, LAIR OF AXIS SUBMARINES

AS FLEETS of Axis submarines in the Atlantic take a constantly increasing toll of shipping, planes from Britain increase their raids on Lorient, port on France's Brittany coast midway between Brest and St. Nazaire.

As the port had cranes and drydocks for complete submarine overhauling, and was conveniently situated as a base for undersea raids on English Channel and North Sea shipping (as well as convoys crossing the Atlantic), the Nazis immediately turned it into a submarine base after the fall of France in 1940.

Lorient's deep-water harbor is four miles from the sea on the west bank of the bay formed by the junction of the Scorff and Blavet Rivers.

For many years France's chief port for naval construction, and site of a naval arsenal, Lorient was named by the Compagnie de l'Orient (the French East India Company), which established warehouses and shipyards there in 1664.

Lorient's 50,000 residents were principally engaged in shipbuilding, shipping, and warehousing, although many thousands were fishermen. Sardine fishing in the Bay of Biscay, in the coastal waters from Lorient west to Concarneau, has made Brittany world-famous as the home of this small and popular fish.

### TURKEY, A GOOD VESTIBULE, WOULD MAKE BAD BATTLEFIELD

AN AGES-OLD land-bridge between Europe and Asia, Turkey has for centuries funneled traffic between the two continents through Istanbul.

With war on every side, however, Turkey can reflect with satisfaction that her travel facilities have many drawbacks to discourage would-be invaders.

Inhabited by shepherds and farmers since the earliest times, the country's mountainous east is crisscrossed by an intricate network of foot trails and bridle paths, with occasional third-rate roads that often peter out on steep slopes or in rocky gorges (illustration, next page).

Only two highways cross central Turkey to the eastern border. The southern one winds past Mt. Ararat into northwest Iran. The northerly one, from the Black Sea port of Trabzon, cuts southeast over the mountains to Erzurum, where it branches to extend one arm into the U.S.S.R. and the other into Iran.

The one through rail line of this region is a line of many interruptions. It runs through Anatolia and Erzurum to the U.S.S.R. Travelers and freight must change trains twice along the way, because the tracks are of three different widths—standard European gauge to Erzurum, narrow gauge to Sarikamis, and east of there, Russian gauge, wider than the European.

A short narrow-gauge line runs from Karakose in eastern Turkey into Iran.

Into Syria and Iraq, Turkey's transportation is less limited. The newly completed Berlin-Baghdad Railroad links Europe with Syria and Iraq (illustration, inside cover). Another rail line sweeps across southeastern Turkey to the border town of Cizre, where it meets a good highway into Iraq.

### FOURTH-OF-JULY CELESTITE PAINTS WAR SCENES RED

Celestite, old stand-by of the fireworks industry, has packed up its Fourth-of-July sparks and sky-streaks and gone to war.

In peacetime this mineral furnished the red blaze for fireworks. Now it flashes red as the tracer bullet starts on its glowing trail.

The hammock that swings under many a house is not for a drowsy native. It is the "resting" place in which a chosen pig fattens for a feast.

Tree-dwellers in southwest Papua build their own "skyscrapers," although they are equipped only with stone axes. These tallest of houses, perched in trees 60 feet above the ground, are often occupied by the shortest of Papuans—pygmies between four and five feet tall.

Note: Papua is shown on the National Geographic Society's Map of the Indian Ocean, and Map of the Theater of War in the Pacific.

For additional material on Papua, see these articles in the *National Geographic Magazine*: "Treasure Islands of Australasia," June, 1942; "Into Primeval Papua by Seaplane," September, 1929\*; "Pictorial Jaunt Through Papua," January, 1927\*; and the following *GEOGRAPHIC SCHOOL BULLETINS*: "The Buna-Gona Sector of the New Guinea Front," January 4, 1943; "Rain Hampers Both Sides in New Guinea Battles," November 16, 1942; and "Gold and Savages on New Guinea," March 30, 1942. (*Issues marked with an asterisk are included in a special list of Magazines available to teachers at 10¢ a copy, in groups of 10.*)

Bulletin No. 2, February 15, 1943.



Frank Hurley

#### THE FLOUR MILLER OF PAPUA IS FIRST A LUMBERJACK

Instead of wheat flour or corn meal, the Papuan eats sago flour. Some natives plant the slow-growing sago palms around the village for their heirs, whose property the full-grown palms become. Natives without private sago groves find the palm growing wild in swamps. The men cut down a swamp palm and shave off its bark (background). Others patiently pound the palm's pithy central core with crude mallets (foreground) to chip off the starchy fibers. These they turn over to the women, who wash the sticky pulp in wooden basins and collect the starch grains of "flour" that float out. Sago flour is stored in cylinders of dry bamboo.

# INDEX TO GEOGRAPHIC SCHOOL BULLETINS

Covering Volume XXI, No. 1, February 23, 1942, through No. 30, February 15, 1943.

**Editor's Note:** Illustrations appearing with articles are not listed unless more than one illustration concerning the article appears in the same issue (except in the case of the Geo-Graphic Brevity).

## AFRICA

**Algeria:** Exploring French North Africa's Desert Reaches, Dec. 7, 1942.  
Thumbnail Gazetteer of Embattled French North Africa, Nov. 30, 1942.  
U. S. Troops Open New Front in French North Africa, Nov. 23, 1942.  
Veils for Moslem Women Still Important in North Africa, 1 ill., Dec. 7, 1942 (Geo-Graphic Brevity).  
**Belgian Congo:** Belgian Congo Riches on United Nations Side, Mar. 23, 1942.  
**Egypt:** Egypt: An Innocent Bystander Embroiled, 1 ill., 1 map, Oct. 5, 1942.  
Libian Desert Dwellers Plug Noses Against the Khamsin, 1 ill., May 11, 1942 (Geo-Graphic Brevity).  
Additional ill.: Unloading American Tanks, Nov. 23, 1942.  
**Eritrea:** Eritrea Holds U. S. Troops in Climatic Fighting Pan, 2 ill., Oct. 19, 1942.  
**French Equatorial Africa:** Chad, Mid-African French Colony, Named for "Breathing" Lake, Jan. 11, 1943.  
**French Possessions:** See Algeria, French Equatorial Africa, French Somaliland, French West Africa, Morocco, Tunisia, and Islands; Madagascar, Réunion Island.  
**French Somaliland:** Somaliland Switches to the Fighting French, Jan. 25, 1943.  
**French West Africa:** French Northwest Africa Approaches Size of U. S., May 4, 1942.  
Key Dakar No Longer a Threat to the Americas, Dec. 14, 1942.  
**Gold Coast:** U. S. Troops Find Gold Coast Chocolate-Covered, Oct. 26, 1942.  
**Italian East Africa:** New Allied Life Line Across Africa, Mar. 9, 1942.  
**Liberia:** Liberia, a U. S.-Built Haven for U. S. Forces, Nov. 9, 1942.  
**Libya:** Bases and Battlefields Skirt Libya's Coast, Jan. 11, 1943.  
Free French Raid Date-Rich Fezzan, Libian "Back Yard," Mar. 30, 1942.  
Libian Desert Dwellers Plug Noses Against the Khamsin, 1 ill., May 11, 1942 (Geo-Graphic Brevity).  
Tripolitania Again a Desert Battleground of Empires, Jan. 25, 1943.  
U. S. Naval History Once Was Made at Tripoli, Jan. 18, 1943.  
**Morocco:** Casablanca, Conference City, Is North Africa's New York, Feb. 15, 1943.  
Exploring French North Africa's Desert Reaches, Dec. 7, 1942.  
Thumbnail Gazetteer of Embattled French North Africa, Nov. 30, 1942.  
**Mozambique:** Lourenco Marques an Indian Ocean Neutral, May 18, 1942 (Geo-Graphic Brevity).  
**Tunisia:** Exploring French North Africa's Desert Reaches, Dec. 7, 1942.  
Half-Desert, Half-Fertile Tunisia, an Ancient Battlefield, Dec. 7, 1942.  
Oddities of Tunisia, Jan. 4, 1943.  
Seven Battlegrounds of Tunisia, Dec. 14, 1942.  
Thumbnail Gazetteer of Embattled French North Africa, Nov. 30, 1942.  
U. S. Troops Open New Front in French North Africa, Nov. 23, 1942.  
Veils for Moslem Women Still Important in North Africa, 1 ill., Dec. 7, 1942 (Geo-Graphic Brevity).  
Additional ill.: Street scene, Sfax, May 4, 1942.

## ASIA

**General:** New Map of Asia and Europe Covers All Major Battle Grounds, Nov. 30, 1942.  
**Afghanistan:** Ill.: Tea house in corner of bazaar, Apr. 20, 1942.  
**Arabia:** See Islands: Bahrein Islands.  
**Burma:** Burma of the Peacocks, India's Eastern Flank, 2 ill., Mar. 23, 1942.  
India Road to China, a Burma Road Substitute, Mar. 16, 1942.  
Monsoon Lords It over Asiatic Battlefields, 1 ill., May 18, 1942 (Geo-Graphic Brevity).  
Petroleum Is a Stake in Burma, Apr. 27, 1942 (Geo-Graphic Brevity).  
Rangoon to Canberra: Capitals Seized or Threatened, Mar. 30, 1942.  
**Ceylon:** Ceylon, Where Japanese Threaten World's Tea Chest, 2 ill., Apr. 27, 1942.  
**China:** Chekiang, China's Rich "Bomb-Tokyo" Province, 2 ill., Oct. 19, 1942.  
Extra Foreign Rights in China Built Colorful Cities, 3 ill., Nov. 16, 1942.  
India Road to China, a Burma Road Substitute, Mar. 16, 1942.  
Yunnan, China's Back Door Province of Mines and Magic, Feb. 1, 1943.  
Additional ill.: Rolling silkworm cocoons on wooden reel, Nov. 30, 1942.  
See Korea.  
**Chosen:** Korea Is Non-British in Nine Spots, 1 ill., May 4, 1942 (Geo-Graphic Brevity).  
**French Empire:** India Is Non-British in Nine Spots, 1 ill., May 4, 1942 (Geo-Graphic Brevity).  
**India:** Bombs May Disturb Strange Parsi Funeral Rites, Nov. 2, 1942 (Geo-Graphic Brevity).  
Chittagong, Sea Door for Eastern India, Jan. 18, 1943.  
India Is Non-British in Nine Spots, 1 ill., May 4, 1942 (Geo-Graphic Brevity).  
India Road to China, a Burma Road Substitute, Mar. 16, 1942.  
Monsoon Lords It over Asiatic Battlefields, 1 ill., May 18, 1942 (Geo-Graphic Brevity).  
Textile-Famed Madras Has Enriched the English Language, May 11, 1942 (Geo-Graphic Brevity).  
Varied Peoples of India, 3 ill., Apr. 20, 1942.  
War Activity in Simla, India's Hilltop Summer Capital, Mar. 23, 1942 (Geo-Graphic Brevity).  
See also Islands: Andaman Islands.  
**Iraq:** Iraq, Arabian Nights Land, a Moslem Ally for United Nations, Feb. 8, 1943.  
**Japan:** Japan Now Controls the Orient's Export Rice, 1 ill., Apr. 20, 1942 (Geo-Graphic Brevity).  
Japan's Prison Island for Americans (Shikoku Island), May 4, 1942 (Geo-Graphic Brevity).  
Japan's Rail and Ferry Lifelines, May 18, 1942.  
Kobe Is Center of Japanese Shipyards and Shipping, 1 ill., Apr. 13, 1942 (Geo-Graphic Brevity).  
See also Korea and Islands: Marshall Islands.  
**Korea:** Korea "Exhibit A" in Japan's "Co-Prosperity" Program, Nov. 9, 1942.  
**Levant States:** New Bible Lands Railway Strengthens Oil Defense, 3 ill., Oct. 26, 1942.  
**Netherlands Indies:** Ambonina Was Defense Key to Eastern Netherlands Indies, Feb. 23, 1942.  
Indies: 3,000 Miles of Populous, Productive Islands, 2 ill., Mar. 9, 1942.  
Rangoon to Canberra: Capitals Seized or Threatened, Mar. 30, 1942.  
Sumatra Shares War Danger, Mar. 2, 1942.  
See also Islands: New Guinea.  
**Palestine:** New Bible Lands Railway Strengthens Oil Defense, 3 ill., Oct. 26, 1942.  
**Russia:** See U. S. S. R. (European).  
**Thailand:** Ill.: Family eating rice, Apr. 20, 1942.  
**Turkey:** Milas, Hit by Bombs, Missed by Turkish Boom, Apr. 13, 1942 (Geo-Graphic Brevity).  
Turkey, a Good Vestibule, Would Make Bad Battlefield, 2 ill., Feb. 15, 1943 (Geo-Graphic Brevity).

## EUROPE

**General:** New Map of Asia and Europe Covers All Major Battle Grounds, Nov. 30, 1942.  
**Albania:** Mountainous Albania a Reluctant Aid to the Axis, Nov. 16, 1942.

Approximately every fifth bullet shot from American machine guns is the torchbearing type of missile known as a tracer. To each of these bullets is attached a small combustible pellet, containing celestite, which ignites on leaving the gun. From its flaming path the gunner can observe the course of the bullet's flight, estimate how near it came to the target, and correct his aim.

A plaything in peacetime and a pathfinder for bullets in war, celestite has other military duties as a side line. The bright glow of flares lighting up the battle scene, the parachute distress signal, the signal flare shot to the surface from a submerged submarine—all get their dazzling red from celestite.

Blackout signs in London "glow" because of celestite in the paint.

But the battle-torch mineral need not be unemployed at war's end. In peace celestite has many jobs in addition to its sparkling fireworks career—brightening paints, serving as filler in sealing wax and rubber, making signal flares for railroads and distress rockets for steamships. The rayon industry has used celestite to remove impurities from caustic soda.

This mineral owes its heavenly name not to the fact that it soars into celestial heights in war and peace, but to the celestial blue tinge of some of its crystals. It was named for crystals taken from rocks in Pennsylvania the year before George Washington died. Chemists call it strontium sulphate.

California has one of the largest deposits in the U. S. From New York down to the Sergeant York country of Tennessee, celestite is found. In Texas it has been mined, ground, and used as a lubricant in oil-well drilling.

Before the war the U. S. imported the mineral from Great Britain and Germany. War needs may force the U. S. to dig deeper at home to supply a military machine which already consumes about 90 per cent of amounts now available.

**Bulletin No. 3, February 15, 1943.**



*John D. Whiting*

#### **WHERE BALKY DONKEY TRAFFIC ROLLS RIGHT ALONG, MODERN MOTORS BALK**

On the high plateau of eastern Turkey most of the roads carry a steady stream of oxcarts and caravans of small top-heavy donkeys, both helping to wear deep grooves in mountain road-beds. To avoid ruts, this automobile has ventured on a highway's rocky borders and has run upon a rock that lifts the rear wheels off the road. While a mule caravan ambles past, mule drivers and pedestrians are helping to lift the car off the rocks. Although bus service is maintained on many of Turkey's highways, motor hazards are frequent.

**Territories and Insular Possessions:** See Alaska, Aleutian Islands, Canal Zone, Hawaii, Philippine Islands, Puerto Rico, Virgin Islands.  
**Texas:** Ills.: Grapefruit tree, May 4, 1942; Aviation Cadets (2 ill.), Randolph Field, May 18, 1942.  
**Utah:** Ill.: Cutting green tops from sugar beets, Mar. 9, 1942.  
**Virginia:** Ills.: Harvesting peanuts, Apr. 27, 1942; Packing baby chicks in paper cartons, Apr. 27, 1942.  
**Washington (State):** Ill.: Sawmill, Puget Sound, Mar. 2, 1942.  
**Wisconsin:** Ills.: Green Bay, Oct. 26, 1942; Cheese factory, Jan. 11, 1943.

#### CENTRAL AMERICA

**General:** Banned Banana Goes into Partial Eclipse, Feb. 1, 1943.  
Christmas Comes with the Kings, South of the Border, Dec. 14, 1942.  
From Aztec to Army Ration: Chewings Gum's Progress, 2 ill., Nov. 2, 1942.  
Limelight on Latin America 2 ill., Mar. 2, 1942.  
Strategic Materials from Latin America Aid U. S. War Economy, May 18, 1942.  
**British Honduras:** British Honduras Has Peace in Spite of War, 1 ill., May 18, 1942 (Geo-Graphic Brevity).  
**Canal Zone:** Pirate-Fighting Panama Strengthens Defenses, 1 ill., 1 map, May 4, 1942.  
**Guatemala:** Suchiate River Gets Anti-Submarine Bridge, Jan. 23, 1943 (Geo-Graphic Brevity).  
Additional ill.: Sample coffee beans, Department of Agriculture, Guatemala City, Feb. 23, 1942; Camp in jungle, Nov. 2, 1942.  
**Panama:** Ill.: Cutting bunches of bananas from trees, Feb. 1, 1943.  
*See also* Canal Zone.

#### SOUTH AMERICA

**General:** Christmas Comes with the Kings, South of the Border, Dec. 14, 1942.  
Limelight on Latin America, 2 ill., Mar. 2, 1942.  
Rubber Bond Cements Pan American Relations, 2 ill., Apr. 13, 1942.  
Strategic Materials from Latin America Aid U. S. War Economy, May 18, 1942.  
**Latin American Series:** No. 1: Brazil, South American Giant, 2 ill., 1 map, Nov. 30, 1942.  
No. 2: Argentina, Land of Peaks and Pampa, 2 ill., 1 map, Dec. 7, 1942.  
No. 3: Ribbon-Shaped Chile, the Three-In-One Republic, 2 ill., 1 map, Dec. 14, 1942.  
No. 4: Compact Uruguay, the "Purple Land" of Pastures, 2 ill., 1 map, Jan. 4, 1943.  
No. 5: Inland Paraguay a Potential Garden Spot, 2 ill., 1 map, Jan. 11, 1943.  
No. 6: Mountain-Tiered Bolivia, Mineral War Chest, 2 ill., 1 map, Jan. 18, 1943.  
No. 7: Peru, Home of Empire Builders, 2 ill., 1 map, Jan. 5, 1943.  
No. 8: Ecuador: Equator Land of Ice and Volcanic Fire, 2 ill., 1 map, Feb. 1, 1943.  
No. 9: Variety Marks Two-Ocean Colombia, 2 ill., 1 map, Feb. 8, 1943.  
**Argentina:** Argentina, Land of Peaks and Pampa, 2 ill., 1 map, Dec. 7, 1942.  
Additional ill.: Earmarking sheep, Mar. 9, 1942.  
**Bolivia:** Mountain-Tiered Bolivia, Mineral War Chest, 2 ill., 1 map, Jan. 18, 1943.  
Additional ill.: Drilling for tin-ore deposits, May 18, 1942.  
**Brazil:** Brazil: South American Giant, 2 ill., 1 map, Nov. 30, 1942.  
Additional ill.: Brazilian hardening ball of rubber, Apr. 13, 1942.  
**British Guiana:** British Gum, Cousin of Gutta Percha, Drafted for Military Service, 1 ill., Nov. 30, 1942 (Geo-Graphic Brevity).  
**Chile:** Ribbon-Shaped Chile, the Three-In-One Republic, 2 ill., 1 map, Dec. 14, 1942.  
**Colombia:** Variety Marks Two-Ocean Colombia, 2 ill., 1 map, Feb. 8, 1943.  
**Dutch Guiana:** See Surinam.  
**Ecuador:** Ecuador: Equator Land of Ice and Volcanic Fire, 2 ill., 1 map, Feb. 1, 1943.  
Santa Elena Peninsula in Ecuador's Oil Area, New U. S. Base, Nov. 16, 1942.  
*See also* Islands: Galapagos Islands.  
**French Guiana:** French Guiana, Noted for Devil's Island, Now U. S. Neighbor, Feb. 23, 1942.  
**Paraguay:** Inland Paraguay a Potential Garden Spot, 2 ill., 1 map, Jan. 11, 1943.  
**Peru:** Mysteries of Ancient American History Solved, 2 ill., Mar. 16, 1942.  
Peru, Home of Empire Builders, 2 ill., 1 map, Jan. 25, 1943.  
Additional ill.: Llamas and alpacas, Mar. 2, 1942.  
**Surinam:** Balata Gum, Cousin of Gutta Percha, Drafted for Military Service, 1 ill., Nov. 30, 1942 (Geo-Graphic Brevity).  
**Uruguay:** Compact Uruguay, the "Purple Land" of Pastures, 2 ill., 1 map, Jan. 4, 1943.  
**Venezuela:** Union Jack Comes Down as Patos Goes to Venezuela, Nov. 30, 1942 (Geo-Graphic Brevity).

#### AUSTRALIA AND NEW ZEALAND

**Australia:** Australia: A Territorial Giant of Big Cities and Few People, 2 ill., Mar. 16, 1942.  
Oil-Thirsty Australia Reaches Across Oceans for Fuel, Feb. 8, 1943 (Geo-Graphic Brevity).  
Rangoon to Canberra: Capitals Seized or Threatened, Mar. 30, 1942.  
Torres Strait Islands, from Cannibalism to Christianity, Apr. 20, 1942 (Geo-Graphic Brevity).  
*See also* Islands: New Guinea.

**New Zealand:** New Zealand, Britain's Remote Larder, Mobilizes for Defense, Apr. 13, 1942.

#### ISLANDS

**General:** Islands in the News, Feb. 1, 1943.  
**Aleutian Islands:** See North America: Alaska.  
**Amboina:** Amboina Was Defense Key to Eastern Netherlands Indies, Feb. 23, 1942.  
**Andaman Islands:** Andaman Islands: Stepping Stones from Burma to India, Apr. 13, 1942 (Geo-Graphic Brevity).  
**Bahrain Islands:** Yacht-Guarded Bahrain Islands Rich in Pearls and Petroleum, Nov. 2, 1942.  
**Bali:** Ill.: Native caravans, Mar. 9, 1942.  
**Barbados:** Islands in the News, Feb. 1, 1943.  
**Bass Islands:** Islands in the News, Feb. 1, 1943.  
**Channel Islands:** Commandos Raid Channel Steppingstone, Isle of Sark, Nov. 2, 1942.  
**Corsica:** Corsica, Napoleon's Home, Has New Dictator, Dec. 7, 1942 (Geo-Graphic Brevity).  
**Cuba:** War Drafts Sugar for Double Duty, 2 ill., Mar. 9, 1942.  
**Fiji Islands:** New U. S. Bases in Fiji Islands Are Free of Many Tropic Ills, 2 ill., Nov. 23, 1942.  
**Galapagos Islands:** Galapagos Islands To Help U. S. Defend Panama Canal, 2 ill., Oct. 12, 1942.  
**Hawaii:** Hawaiian Islands at Pacific Crossroads, 2 ill., Apr. 13, 1942.  
Additional ill.: Filipinas picking coffee beans, Nov. 23, 1942.  
**Isle of Sark:** See Channel Islands.  
**Jan Mayen Island:** Islands in the News, Feb. 1, 1943.  
**Java:** Rangoon to Canberra: Capitals Seized or Threatened, Mar. 30, 1942.  
**Lampedusa Island:** See Italy.  
**Madagascar:** Madagascar, France's Queen Island of the Indian Ocean, May 11, 1942.  
Madagascar Landscape a Freak Show of Nature, 2 ill., Oct. 12, 1942.  
**Marshall Islands:** Marshall Islands, Where U. S. Blasted Japanese Territory, Mar. 2, 1942.  
**Netherlands Indies:** See New Guinea, and Asia: Netherlands Indies.  
**New Caledonia:** Americans in New Caledonia Are Far from Home, May 18, 1942.  
**New Guinea:** Buna-Gona Sector of the New Guinea Front (Papua), Jan. 4, 1943.  
Gold and Savagery on New Guinea, World's Second Largest Island, 3 ill., Mar. 30, 1942.  
Owen Stanley Mountains a Jungle Battleground (Papua), Oct. 26, 1942.  
People of Pacific Papua, New Guinea's Southeast Quarter, 2 ill., Feb. 15, 1943.  
Rain Hampers Both Sides in New Guinea Battles, Nov. 16, 1942.  
**New Hebrides:** New Hebrides: More Islands for Yanks to Write Home About, Dec. 14, 1942.  
**Papua:** See New Guinea.

**British Empire:** See Africa; Gold Coast; Asia; Burma, Ceylon, India; Australia; Central America; British Honduras; Islands: Andaman Islands, Barbados, Channel Islands, Fiji Islands, New Guinea, New Hebrides, Patos Island, Solomon Islands; and South America; British Guiana.

**England:** Canterbury, English Victim of German Repulse Bombing, Oct. 19, 1942 (Geo-Graphic Brevity). Cornwall, Tie "Pixies" to Help United Nations, 1 ill., Oct. 5, 1942 (Geo-Graphic Brevity). White Cliffs of Dover Bombed Again, 1 ill., Apr. 27, 1942 (Geo-Graphic Brevity). See also British Empire; Northern Ireland; and Islands: Channel Islands.

**France:** Bombed Lille, French Textile City, Was Safe in Last War, Nov. 2, 1942 (Geo-Graphic Brevity). Dieppe Was Geography Problem for Commandos, Oct. 5, 1942 (Geo-Graphic Brevity). France's Captive Capital, Vichy, Mar. 23, 1942.

Lorient, Lair of Axis Submarines, Feb. 15, 1943 (Geo-Graphic Brevity). Riom, a Medieval Setting for French War-Guilt Trials, Apr. 20, 1942 (Geo-Graphic Brevity). Site, Lagoon-Site Seaport of Southern France, 1 ill., Mar. 2, 1942 (Geo-Graphic Brevity). Toulon, the Scapa Flow of World War II, Jan. 4, 1943 (Geo-Graphic Brevity).

**French Empire:** See Africa; Algeria, French Equatorial Africa, French Somaliland, French West Africa, Morocco, Tunisia; Asia; French Empire, Levant States; Islands: Corsica, Madagascar, New Caledonia, New Hebrides, Réunion Island, Tahiti; and South America; French Guiana.

**Germany:** Blasts of British Bombs Blend with Mighty Roar of the Ruhr, Feb. 1, 1943. "Father Rhine," Bomber's Guide to Germany's War Industries, Oct. 12, 1942.

**Great Britain:** See England, Northern Ireland, and British Empire.

**Italian Empires:** See Africa; Eritrea, Libya.

**Italy:** Islands in the News (Lampedusa Island), Feb. 1, 1943.

Italy Lacks Raw Material for War Machine, 1 ill., Jan. 25, 1943 (Geo-Graphic Brevity). Ports of Northwest Italy Cringe Beneath Bombs, Feb. 8, 1943.

**Netherlands:** Ill.; Edam cheeses on wharf, Alkmaar, Feb. 23, 1942.

**Netherlands Empire:** See Asia; Netherlands Indies, and South America; Surinam.

**Northern Ireland:** Northern Ireland, New Transatlantic Base for U. S. Forces, Feb. 23, 1942.

**Norway:** Islands in the News, Feb. 1, 1943. Trondheim, Norway's Westminster, 1 ill., Nov. 2, 1942 (Geo-Graphic Brevity). Additional ill.: Cliffs at North Cape, Oct. 19, 1942.

**Portugal:** Portugal Offers Many Products Used by U. S. in War and Peace, Jan. 4, 1943.

**Portuguese Empire:** India Is Non-British in Nine Spots, 1 ill., May 4, 1942 (Geo-Graphic Brevity). See also Africa; Mozambique, and Islands: Timor.

**Russia:** See U. S. S. R. (European).

**Spain:** Ill.: Wagonload of cork, Seville, Mar. 23, 1942.

**U. S. S. R. (European):** Americans Helped Build Stalingrad, Key City of the Volga, Oct. 5, 1942 (Geo-Graphic Brevity). Flat Russia's Winter Sweeps Far South, Oct. 26, 1942.

Frosty Caucasus Wall, Russia's Mountain Rampart, 2 ill., Nov. 2, 1942.

Georgian Military Road—130 Miles of Scenery and Danger, Nov. 23, 1942.

Novgorod Was Russia's "Birthplace," Apr. 13, 1942 (Geo-Graphic Brevity).

Russian Oil, Magnet of the Caucasus, Oct. 5, 1942.

Russia's Volga Is Europe's Longest River, May 11, 1942 (Geo-Graphic Brevity).

Sevastopol's Battles Launched Florence Nightingale, Apr. 27, 1942 (Geo-Graphic Brevity).

Sixteen Miniature "Nations" Crammed into Russia's Caucasus, Oct. 12, 1942.

Soviet Union to Observe 25th "Independence Day," Nov. 9, 1942 (Geo-Graphic Brevity).

Strategic Materials (No. 11): Manganese by the Spoonful for Steel, May 4, 1942.

U. S. S. R.'s Nalchik Was Caucasus Resort Town, 1 ill., Jan. 11, 1943 (Geo-Graphic Brevity).

U. S. Has Surpassed Germany in Commerce with Russia, Apr. 20, 1942.

Valdai Hills, the "Great Divide" on Russia's Vast Plain, Mar. 2, 1942 (Geo-Graphic Brevity).

## NORTH AMERICA

**Alaska:** Alaska-Canada Highway To Open a New "Last Frontier," 2 ill., Apr. 27, 1942.

Facts about the Foggy Aleutians, Oct. 19, 1942.

Fog-Shrouded Aleutians Are U. S. "Gangplank" Toward Asia, May 11, 1942.

Alaska-Canada Highway To Open a New "Last Frontier," 2 ill., Apr. 27, 1942.

Christmas Comes with the King, Son of the Border, Dec. 14, 1942.

Limelight on Latin America, 2 ill., Mar. 2, 1942.

Mysteries of Ancient American History Solved, 2 ill., Mar. 16, 1942.

New Defense Service Across Mexican Isthmus of Tehuantepec, Apr. 20, 1942.

Rugged Baja California Guards Mexico, Mar. 9, 1942.

Suchiate River Gets Anti-Submarine Bridge, Jan. 25, 1943 (Geo-Graphic Brevity).

Additional ill.: Temple ruins, Chichen Itza, Nov. 2, 1942; Unearthing tomb, La Venta, Jan. 18, 1943.

## UNITED STATES

**General:** Inland Waters Safely Carry U. S. War Supplies, Oct. 26, 1942.

U. S. Has Surpassed Germany in Commerce with Russia, Apr. 20, 1942.

**Defense Bases:** Eritrea Holds U. S. Troops in Climatic Frying Pan, 2 ill., Oct. 19, 1942.

Galapagos Islands To Help U. S. Defend Panama Canal, 2 ill., Oct. 12, 1942.

Liberia, a U. S.-Built Haven for U. S. Forces, Nov. 9, 1942.

New Hebrides: More Islands for Yanks to Write Home About, Dec. 14, 1942.

New U. S. Bases in Fiji Islands Are Free of Many Tropic Ills, 2 ill., Nov. 23, 1942.

Northern Ireland, New Transatlantic Base for U. S. Forces, Feb. 23, 1942.

Santa Elena Peninsula in Ecuador's Oil Area, New U. S. Base, Nov. 16, 1942.

U. S. Troops Find Gold Coast Chocolate-Covered, Oct. 26, 1942.

Yankee-Guarded Bahrain Islands Rich in Pearls and Petroleum, Nov. 2, 1942.

**History:** Happy Birthday!—Tell It to the Marines, Nov. 9, 1942.

U. S. Naval History Once Was Made at Tripoli, Jan. 18, 1943.

**Strategic Materials:** Strategic Materials (No. 11): Manganese by the Spoonful for Steel, May 4, 1942.

Strategic Materials (No. 12): Quartz Crystal, Robot Boss of Radio, 2 ill., May 11, 1942.

Strategic Materials from Latin America Aid U. S. War Economy, May 18, 1942.

**War Effort:** Aviation Cadets Now Can Sprout Their Wings in School, 2 ill., May 18, 1942.

Building Materials Join the War Effort, Mar. 2, 1942.

Conservation from Head to Heel Saves Clothing from Afar, Mar. 9, 1942.

Defense Cities, Splitting at Seams, Report Population Boom, Feb. 23, 1942.

Priorities That Geography Built, 2 ill., Mar. 23, 1942.

War Homes Make Changes in Nation's Landscape, Mar. 16, 1942.

Waste Paper Goes to War, Apr. 27, 1942.

What Do You Know about Tanks? 2 ill., Nov. 23, 1942.

Why Is Scrap Metal Necessary? Oct. 5, 1942.

Women at Work: How Aunt America Helps Uncle Sam Fight, 2 ill., May 11, 1942.

World War Spurs Building and Manufacturing in 1942, Jan. 18, 1943.

**California:** Ills.: Building training planes for R. A. F., Inglewood, Feb. 23, 1942; Defense worker's tent, Mission Valley, Mar. 16, 1942; Women workers, aircraft plant, San Diego, May 11, 1942.

**District of Columbia:** Defense Cities, Splitting at Seams, Report Population Boom, Feb. 23, 1942.

**Iowa:** Ill.: Pigs on Iowa farm, Nov. 16, 1942.

**New Mexico:** Ill.: Hopi Indian painting pottery, Mar. 16, 1942.

**New York:** Ills.: LaGuardia Field, May 11, 1942; Plowing with automobile-tractor, May 11, 1942.

**Tennessee:** Ill.: Pencil factory, Shelbyville, Jan. 25, 1943.

**Radio:** Strategic Materials (No. 12); Quartz Crystal, Robot Boss of Radio, 2 illus., May 11, 1942.  
**Railroads:** Japan's Rail and Ferry Lifelines, May 18, 1942.  
 New Bible Lands Railway Strengthens Oil Defense, 3 illus., Oct. 26, 1942.  
 New Defense Service Across Mexican Isthmus of Tehuantepec, Apr. 20, 1942.  
 Turkey, A Good Vestibule, Would Make Bad Battlefield, 2 illus., Feb. 15, 1943 (Geo-Graphic Brevity).  
 Additional ill.: Steel parts of ships on train, Jan. 18, 1943; Train on Visca Bridge, Peru, Jan. 25, 1943.

**Rickshaws:** III.: Shanghai, China, Nov. 16, 1942.  
**Rivers:** "Father Rhine," Bomber's Guide to Germany's War Industries, Oct. 12, 1942.  
 Inland Waters Safely Carry U. S. War Supplies, Oct. 26, 1942.  
 Russia's Volga Is Europe's Longest River, May 11, 1942 (Geo-Graphic Brevity).  
 Suchiate River Gets Anti-Submarine Bridge, Jan. 25, 1943 (Geo-Graphic Brevity).  
*See also* Physical Geography: Rivers.

**Street Cars:** Ills.: Shanghai, China, Nov. 16, 1942; Rio de Janeiro, Nov. 30, 1942; Montevideo, Uruguay, Jan. 4, 1943.  
**Subways:** Ill.: Subway station, Buenos Aires, Argentina, Dec. 7, 1942.  
**Tanks:** What Do You Know about Tanks? 2 illus., Nov. 23, 1942.

### COMMERCE, INDUSTRY, AND AGRICULTURE

**General:** World War Spurs Building and Manufacturing in 1942, Jan. 18, 1943.  
**Agriculture:** Peanuts Volunteer for Front-Line Duty, Apr. 27, 1942.  
 Additional ill.: Cutting green tops from sugar beets, Utah, Mar. 9, 1942; Air view of gardens, New Guinea, Mar. 30, 1942; Threshing machine harvesting peanuts, Virginia, Apr. 27, 1942; Plowing with automobile-tractor, New York, May 11, 1942; Carrying hay, Albany, Nov. 16, 1942; Pigs, Iowa farm, Nov. 16, 1942; Plowing with horse and cart, Morocco, Nov. 23, 1942; Grass skirt on orange tree as protection against ants, Brazil, Nov. 30, 1942; Outdoor class in agriculture, U. S. S. R., Jan. 11, 1943.

**Aluminum:** Priorities That Geography Built, 2 illus., Mar. 23, 1942.  
**Ammunition:** Fourth-of-July Celeste Paints War Scenes Red, Feb. 15, 1943 (Geo-Graphic Brevity).  
**Balata Gum:** Women at Work: How Aunt America Helps Uncle Sam Fight, 2 illus., May 11, 1942.  
 Balata Gum, Cousin of Gutta Percha, Drafted for Military Service, 1 ill., Nov. 30, 1942 (Geo-Graphic Brevity).

**Bananas:** Banned Banana Goes into Partial Eclipse, Feb. 1, 1943.  
**Bazaars:** Ill.: Tea House in corner of bazaar, Afghanistan, Apr. 20, 1942.  
**Bristles:** Old Paint Brushes Stay on Job as Bristle Imports Stop, Nov. 16, 1942.  
**Butter:** Ill.: Women churning sheep's milk in goat's skin, Tunisia, Dec. 7, 1942.  
**Cacao:** Ship Shortage May Diet Your "Chocolate Tooth," Oct. 12, 1942.  
 U. S. Troops Find Gold Coast Chocolate-Covered, Oct. 26, 1942.  
 Additional ill.: Workman stirring cacao beans with feet, Guayaquil, Ecuador, Feb. 1, 1943.  
**Casein:** Casein Can Make Miss Muffet a Modern Glamor Girl, Jan. 11, 1943.  
**Cattle Raising:** Compact Uruguay, the "Purple Land" of Pastures, 2 illus., 1 map, Jan. 4, 1943.  
 Additional ill.: Outdoor class in agriculture, U. S. S. R., Jan. 11, 1943.

**Celestite:** Fourth-of-July Celeste Paints War Scenes Red, Feb. 15, 1943 (Geo-Graphic Brevity).  
**Cheese:** Ills.: Edam cheeses on wharf, Alkmaar, Netherlands, Feb. 23, 1942; Cheese factory, Wisconsin, Jan. 11, 1943.

**Chewing Gum:** From Aztec to Army Ration: Chewing Gum's Progress, 2 illus., Nov. 2, 1942.  
**Chocolate:** See Cacao.  
**Coal:** Blasts of British Bombs Blend with Mighty Roar of the Ruhr, Feb. 1, 1943.  
**Coffee:** Additional ill.: Piles of coal, Green Bay, Wisconsin, Oct. 26, 1942.  
 Coffee, Chief U. S. Hot Drink, Known to West Barely 300 Years, Nov. 23, 1942.  
**Copper:** Additional ill.: Sample beans, Department of Agriculture, Guatemala City, Feb. 23, 1942.  
**Cork:** War Takes Nickel out of "Nickel," Pinches Pennies, Mar. 30, 1942.  
**Cotton:** Additional ill.: Copper mine, Andes Mountains, Mar. 23, 1942.  
**Conservation:** Conservation from Head to Heel Saves Clothing from Afar, Mar. 9, 1942.  
**Diamonds:** Belgian Congo Riches on United Nations' Side, Mar. 23, 1942.  
**Fish and Fishing:** Sardines, a Favorite Meat Substitute from West Coast Waters, Dec. 7, 1942.  
 War Booms Shark Fishing, 1 ill., Oct. 19, 1942 (Geo-Graphic Brevity).  
 Additional ill.: Fishermen folding nets, Sète, France, Mar. 2, 1942; Native fishing under water, Sulu Archipelago, Mar. 23, 1942; Cooking cans of tuna, Apr. 13, 1942; Salmon rack, Aleutian Islands, Oct. 19, 1942; Natives fishing, Solomon Islands, Nov. 9, 1942.  
**Food:** See Peoples and Cultures: Food.  
**Gasoline:** See Oil.  
**Gold:** Gold and Savages on New Guinea, World's Second Largest Island, 3 illus., Mar. 30, 1942.  
**Graphite:** Graphite for Writing and Fighting, Jan. 25, 1943.  
**Harbors and Ports:** Casablanca, Conference City, Is North Africa's New York, Feb. 15, 1943.  
 Chittagong, Sea Door for Eastern India, Jan. 18, 1943.  
 Key Dakar No Longer a Threat to the Americas, Dec. 14, 1942.  
 Kobe Is Center of Japanese Shipyards and Shipping, 1 ill., Apr. 13, 1942 (Geo-Graphic Brevity).  
 Lorient, Lair of Axis Submarines, Feb. 15, 1943 (Geo-Graphic Brevity).  
 Ports of Northwest Italy Cringe Beneath Bombs, Feb. 8, 1943.  
 Toulon, the Scapa Flow of World War II, Jan. 4, 1943 (Geo-Graphic Brevity).  
**Hay:** Ill.: Albanians carrying hay, Nov. 16, 1942.  
**Hides:** Ill.: Montevideo, Uruguay, Jan. 4, 1943.  
**Imports and Exports:** Balata Gum, Cousin of Gutta Percha, Drafted for Military Service, 1 ill., Nov. 30, 1942 (Geo-Graphic Brevity).  
 Banned Banana Goes into Partial Eclipse, Feb. 1, 1943.  
 Belgian Congo Riches on United Nations' Side, Mar. 23, 1942.  
 Ceylon Where Japanese Threaten World's Tea Chest, 2 illus., Apr. 27, 1942.  
 Coffee, Chief U. S. Hot Drink, Known to West Barely 300 Years, Nov. 23, 1942.  
 From Aztec to Army Ration: Chewing Gum's Progress, 2 illus., Nov. 2, 1942.  
 Old Paint Brushes Stay on Job as Bristle Imports Stop, Nov. 16, 1942.  
 Portugal Offers Many Products Used by U. S. in War and Peace, Jan. 4, 1943.  
 Priorities That Geography Built, 2 illus., Mar. 23, 1942.  
 Rubber Bond Cements Pan American Relations, 2 illus., Apr. 13, 1942.  
 Teakettles Sing Around the World in Spite of War, Apr. 20, 1942.  
 U. S. Has Surpassed Germany in Commerce with Russia, Apr. 20, 1942.  
 War Drafts Sugar for Double Duty, 2 illus., Mar. 9, 1942.  
 What Foods for the United States Come from Abroad? 3 illus., Feb. 23, 1942.

**Iron and Steel:** Blasts of British Bombs Blend with Mighty Roar of the Ruhr, Feb. 1, 1943.  
 Italy Lacks Raw Materials for War Machine, 1 ill., Jan. 25, 1943 (Geo-Graphic Brevity).  
 Steel Shortage! And Sponge Iron to the Rescue, Feb. 8, 1943.  
 Strategic Materials (No. 11); Manganese by the Spoonful for Steel, May 4, 1942.  
 Why Is Scrap Metal Necessary? Oct. 5, 1942.  
 Additional ill.: Steel parts of ships on train, Jan. 18, 1943.

**Irrigation:** Ills.: Air view of irrigation ditches in sugar cane fields, Puerto Rico, Mar. 9, 1942; Air view of drainage ditches, New Guinea, Mar. 30, 1942; Water wheel, China, Oct. 19, 1942.  
*See also* Peoples and Cultures: Dams, and Wells.

**Lime Kiln:** Ill.: St. John, Virgin Islands, Mar. 30, 1942.  
**Lumbering:** Building Materials Join War Effort, Mar. 2, 1942.  
 Additional ill.: Elephants pushing teak logs in stream, Burma, Mar. 23, 1942.

**Patos Island:** See South America; Venezuela.

**Philippine Islands:** Cebu, Second City of the Philippines, May 4, 1942 (Geo-Graphic Brevity). Fighting Igorots of the Philippines, Mar. 16, 1942. Japanese Attacked Only Sultanate under U. S. Flag (Sulu Archipelago), 1 ill., Mar. 23, 1942 (Geo-Graphic Brevity).

**Puerto Rico:** Ill.; Air view of Central Mercedita, Mar. 9, 1942.

**Réunion Island:** Réunion Island, Isolated Bit of France in Indian Ocean, Jan. 11, 1943 (Geo-Graphic Brevity).

**Savo Island:** Islands in the News, Feb. 1, 1943.

**Shikoku Island:** See Asia; Japan.

**Shortland Islands:** Islands in the News, Feb. 1, 1943.

**Solomon Islands:** Islands in the News, Feb. 1, 1943. Solomon Islands, Where Marines and Japs Clash, Oct. 5, 1942. Solomons Battlefield of Guadalcanal, 2 ills., Nov. 9, 1942.

**Sulu Archipelago:** See Philippine Islands.

**Sumatra:** Sumatra Shares War Danger, Mar. 2, 1942. Additional ill.: Buffalo-drawn two-wheeled carts, Mar. 9, 1942.

**Tahiti:** French Islands of the Pacific, Mar. 23, 1942. Additional ill.: Native spreading vanilla seed pods, Feb. 23, 1942.

**Timor:** Rangoon to Canberra: Capitals Seized or Threatened, Mar. 30, 1942.

**Torres Strait Islands:** See Australia.

**Virgin Islands:** Virgin Islands Face Second War under U. S. Flag, Mar. 20, 1942.

**West Indies:** See Barbados, Cuba, Patos, Puerto Rico, and Virgin Islands.

### POLAR REGIONS

**General:** Convoy Route to Russia Had 24-Hour Daylight, Oct. 19, 1942. Islands in the News, Feb. 1, 1943. Riddle of Snowfall Teases Weather Hobbyists, 1 ill., Feb. 8, 1943 (Geo-Graphic Brevity).

### GEOGRAPHY, MAPS, AND MAP MAKING

**Maps and Map Making:** Geographic Maps Lead Fighters Through Enemy Waters, Feb. 8, 1943 (Geo-Graphic Brevity). New Map of Asia and Europe Covers All Major Battle Grounds, Nov. 30, 1942.

**Maps:** Egypt (pictorial map), showing Nile River, Oct. 5, 1942; Panama, showing Canal Zone, May 4, 1942; Rhine River, Oct. 12, 1942. Latin American Series: Argentina, Dec. 7, 1942; Bolivia, Jan. 18, 1943; Brazil, Nov. 30, 1942; Chile, Dec. 14, 1942; Colombia, Feb. 8, 1943; Ecuador, Feb. 1, 1943; Paraguay, Jan. 11, 1943; Peru, Jan. 25, 1943; Uruguay, Jan. 4, 1943. Additional ill.: Ancient map of Asia, Nov. 30, 1942.

### TRANSPORTATION AND COMMUNICATIONS

**General:** Convoy Route to Russia Had 24-Hour Daylight, Oct. 19, 1942. Inland Waters Safely Crossed by U. S. War Supplies, Oct. 26, 1942. Japan's Rail and Ferry Lifelines, May 18, 1942. New Allied Life Line Across Africa, Mar. 9, 1942. World War Spurs Building and Manufacturing in 1942, Jan. 18, 1943.

**Airplanes and Aviation:** Aviation Cadets Now Can Sprout Their Wings in School, 2 ills., May 18, 1942. Additional ill.: Building training planes for R. A. F., California, Feb. 23, 1942; Transport planes, LaGuardia Field, New York, May 11, 1942; U. S. Navy patrol bomber, May 11, 1942; Women workers sorting airplane rivets, San Diego, May 11, 1942; Airport terminal, Baghdad, Iraq, Feb. 8, 1943.

**Animals:** Ills.: Camels: Tunisia, Dec. 14, 1942; Courier for British forces riding, North Africa, Jan. 14, 1943; Drawing bucket from well, French Equatorial Africa, Jan. 11, 1943; Palanquin, Libia, Jan. 25, 1943; Burros and donkeys: Burro-power drill, Bolivia, May 18, 1942; Donkeys: Guatemala, Nov. 2, 1942; Burro loaded with olive oil cans, Lisbon, Portugal, Jan. 4, 1943; Elephants: Pushing teak logs, Burma, Mar. 23, 1942; Perahera celebration, Ceylon, Apr. 27, 1942; Horses: Pulling wagons of sugar beets, Utah, Mar. 9, 1942; British Honduras, May 18, 1942; Pulling ancient Egyptian chariot (painting), Oct. 5, 1942; Plowing, Morocco, Nov. 23, 1942; Gauchos on horse, Argentina, Dec. 7, 1942. Mules: Pulling wagon load of cork, Seville, Spain, Mar. 23, 1942; Loading, with bananas, Panama, Feb. 1, 1943. Oxen: Hauling carts, Madagascar, May 11, 1942; Drawing dumpcart, Amboina, Feb. 23, 1942. Water buffalo drawing cart, Sumatra, Mar. 9, 1942. Zebras drawing cart, Gôa, India, May 4, 1942. See also Commerce, Industry, and Agriculture: Cattle raising; Sheep and sheep raising; and Natural History: Animals.

**Automobiles:** Ills.: Air view of automobile body plant, Adelaide, Mar. 16, 1942; Plowing with automobile-tractor, New York, May 11, 1942; On road to Kilauea crater, Hawaii, Apr. 13, 1942; Burma Road, May 18, 1942; On highway at Batrun, Levant States, Oct. 26, 1942; On mountain highway, Turkey, Feb. 15, 1943.

**Boats and Ships:** Ills.: Loading Edam cheeses on freighter, Alkmaar, Netherlands, Feb. 23, 1942; Native sailing boat (*jalato*), New Guinea, Mar. 30, 1942; Snake charmer on board ship, Ceylon, Apr. 27, 1942; Ship going through Panama Canal, May 4, 1942; Sailing ships, Gôa, India, May 4, 1942; Russian tankers, Caspian Sea, Oct. 5, 1942; Ship, North Cape, Norway, Oct. 19, 1942; Boat on shore, St. Lawrence River; Marine landing party, Nov. 9, 1942; Ship, Fiji Islands, Nov. 23, 1942; Ship, Algiers, Nov. 30, 1942; Ship parts, Jan. 18, 1943; Fishing boats, Lake of Garda, Italy, Jan. 25, 1943.

**Bridges:** Schiati River Gets Anti-Submarine Bridge, Jan. 25, 1943 (Geo-Graphic Brevity). Additional ill.: Railway bridge, Fuji River, Japan, May 18, 1942; Hangchow, China, Oct. 19, 1942; Aqueduct bridge, Rio de Janeiro, Brazil, Nov. 30, 1942; Viscas Bridge, Peru, Jan. 25, 1943.

**Busses:** Ill.: Air-conditioned bus, Baghdad, Iraq, Feb. 8, 1943.

**Canals:** Ill.: Air-conditioned bus, Baghdad, Iraq, Feb. 8, 1943.

**Canoes:** Additional ill.: Grand Canal, Hangchow, China, Oct. 19, 1942.

**Carts and Wagons:** Ills.: Dugout canoes, Lake Patzcuaro, Mexico, Mar. 2, 1942; Solomon Islands, Nov. 9, 1942. Outrigger canoe, Marshall Islands, Mar. 2, 1942. Burmese canoe, Mar. 23, 1942; War canoe, Solomon Islands, Oct. 5, 1942.

**Chariots:** Ill.: Ancient Egyptian chariot (painting), Oct. 5, 1942.

**Escalators:** Ill.: Subway escalator, Buenos Aires, Argentina, Dec. 7, 1942.

**Highways and Roads:** Alaska-Canada Highway To Open a New "Last Frontier," 2 ills., Apr. 27, 1942. Georgian Military Road—136 Miles of Scenery and Danger, Nov. 23, 1942. India Road to China, a Burma Road Substitute, Mar. 16, 1942. New Allied Life Line Across Africa, Mar. 9, 1942. World War Spurs Building and Manufacturing in 1942, Jan. 18, 1943. Additional ill.: Road to Kilauea crater, Hawaii, Apr. 13, 1942; Burma Road, May 18, 1942; Batrun, Levant States, Oct. 26, 1942; mountain highway, Turkey, Feb. 15, 1943.

**Motorcycles:** Ill.: Courier for British forces riding motorcycle in desert, North Africa, Jan. 4, 1943.

**Pipe Lines:** Iraq, Arabian Nights Land, a Moslem Ally for United Nations, Feb. 8, 1943. World War Spurs Building and Manufacturing in 1942, Jan. 18, 1943.

**Costumes and Clothing—Continued**  
 States, Oct. 26, 1942. Shepherds: Peruvian shepherdess, Mar. 2, 1942; Shepherd wearing poncho, Bolivia, Jan. 18, 1943. Koreans (2 ills.), Nov. 9, 1942. Veiled women, Algiers, Nov. 30, 1942. Women of desert nomad tribe, Sahara Desert, Dec. 7, 1942.

**Dams:** World War Spurs Building and Manufacturing, Oct. 1942, Jan. 18, 1943.  
*See also* Commerce, Industry, and Agriculture: Irrigation.

**Dancers and Dancing:** Ill.: Nash dances, China, Feb. 1, 1943.

**Dwellings:** Building Materials Join the War Effort, Mar. 2, 1942.

**Mysteries of Ancient American History Solved, 2 ills., Mar. 16, 1942.**

**Oddities of Tunisia, Jan. 4, 1943.**

**War Homes Make Changes in Nation's Landscape, Mar. 16, 1942.**

**Additional ills.: Huts, Fiji Islands, Nov. 23, 1942; Bolivia, Jan. 18, 1943; Madagascar, Oct. 12, 1942; New Guinea (air view), Mar. 30, 1942; Jungle village, Sumatra, Mar. 2, 1942; Tingué, Africa, Mar. 9, 1942. Mud-and-wattle house, Belgian Congo, Mar. 23, 1942; Half-underground winter home, Aleutian Islands, May 11, 1942; Tananarive, Madagascar, May 11, 1942; Native home, British Honduras, May 18, 1942; Camp in jungle, Guatemala, Nov. 2, 1942; Korean home, Nov. 9, 1942; Djerba (island), Tunisia, Dec. 14, 1942; Home of Columbus, Genoa, Italy, Feb. 8, 1943.**

**Education:** Ills.: Russian school, Oct. 12, 1942; Outdoor class in agriculture, U. S. S. R., Jan. 11, 1943.

**Eskimos:** See Races and Tribes: Aleuts.

**Expeditions and Exploration:** Mysteries of Ancient American History Solved, 2 ills., Mar. 16, 1942.

**Peru, Home of Empire Builders (reference to National Geographic Society-Yale University expedition), 2 ills., 1 map, Jan. 25, 1943.**

**Scientists Kept Digging in 1942, Jan. 18, 1943.**

**Additional ill.: Dr. and Mrs. Mann visiting jungle village, Sumatra, on National Geographic Society-Smithsonian Institution East Indies Expedition, Mar. 2, 1942.**

**Flags:** Ills.: Chile, Dec. 14, 1942; Uruguay, Jan. 4, 1943.

**Food:** ABC's of Vitamins for Victory, May 4, 1942.

Romania At Sandwiches, Too, Jan. 4, 1943 (Geo-Graphic Brevity).

Tin Can: A Trash-to-Treasure Success Story, Apr. 13, 1942.

What Foods for the United States Come from Abroad? 3 ills., Feb. 23, 1942.

**Additional ills.: Family eating rice, Thailand, Apr. 20, 1942; Aviation Cadets at mealtime, Randolph Field, May 18, 1942; Chinese food, Nov. 16, 1942; preparing sago flour, Papua, Feb. 15, 1943.**

*See also* Commerce, Industry, and Agriculture: Bananas, Butter, Cacao, Cheese, Coffee, Fish and Fishing, Maté, Molasses, Peanuts, Pineapples, Rice, Salt, Sugar, Tea, Vanilla, and Natural History: Fruit.

**Forts and Fortresses:** Rocky Fortress of Corregidor of a Philippine Gibraltar, Mar. 2, 1942 (Geo-Graphic Brevity). Additional ill.: Ancient Indian fortress, Sacahuaman, Peru, Jan. 25, 1943.

**Guns:** What Do You Know about Tanks? 2 ills., Nov. 23, 1942.

**Additional ill.: Forging gun, Germany, Feb. 1, 1943.**

**Handicrafts:** Ills.: Women weaving with hand loom, Northern Ireland, Feb. 23, 1942; Hopi Indian painting pottery, New Mexico, Mar. 16, 1942; Native women making pottery, Belgian Congo, Mar. 23, 1942.

**Holidays, Celebrations, and Customs:** Christmas Comes with the Kings, South of the Border, Dec. 14, 1942.

**Soviet Union to Observe 25th "Independence Day," Nov. 9, 1942 (Geo-Graphic Brevity).**

**Additional ills.: Perahera procession, Ceylon, Apr. 27, 1942; Bridal palanquin, Libia, Jan. 25, 1943.**

**Indians:** Ecuador: Equator Land of Ice and Volcanic Fire 2 ills., 1 map, Feb. 1, 1943.

Mysteries of Ancient American History Solved 2 ills., Mar. 16, 1942.

**Peru, Home of Empire Builders, 2 ills., 1 map, Jan. 25, 1943.**

**Scientists Kept Digging in 1942, Jan. 18, 1943.**

**Additional ills.: Tarascan Indian, Lake Patzcuaro, Mexico, Mar. 2, 1942; Hopi Indian painting pottery, New Mexico, Mar. 16, 1942; Tehuana Indian women, Tehuantepec, Mexico, Apr. 20, 1942; Indian boys, Yukon, Apr. 27, 1942; Indians on horseback, Dec. 14, 1942; Bolivia, Jan. 18, 1943.**

**Lighthouses:** Ill.: Ruins of Roman lighthouse, Dover, England, Apr. 27, 1942.

**Marines:** Happy Birthday!—Tell It to the Marines, Nov. 9, 1942.

U. S. Naval History Once Was Made at Tripoli, Jan. 18, 1943.

**Music and Musicians:** Ill.: Native band, Fiji Islands, Nov. 23, 1942.

**National Geographic Magazine:** Casein Can Make Miss Muffet a Modern Glamor Girl (reference to paper used in National Geographic Magazine), Jan. 11, 1943.

**National Geographic Society:** Banned Banana Goes into Partial Eclipse (reference to National Geographic Society expeditions to Central America), Feb. 1, 1943.

Geographic Maps Lead Fighters Through Enemy Waters, Feb. 8, 1943 (Geo-Graphic Brevity).

Mysteries of Ancient American History Solved, 2 ills., Mar. 16, 1942.

New Map of Asia and Europe Covers All Major Battle Grounds, Nov. 30, 1942.

**Peru, Home of Empire Builders (reference to National Geographic Society-Yale University expedition), 2 ills., 1 map, Jan. 25, 1943.**

**Additional ills.: Dr. and Mrs. Mann visiting jungle village, Sumatra, on National Geographic Society-Smithsonian Institution East Indies Expedition, Mar. 2, 1942; National Geographic Society-Smithsonian Institution expedition unearthing tomb, La Venta, Mexico, Jan. 18, 1943.**

**Pearl Divers:** Ill.: Bahrain Islands, Nov. 2, 1942.

**Pencils:** Graphite for Writing and Fighting, Jan. 25, 1943.

**Populations:** Defense Cities, Splitting at Seams, Report Population Boom, Feb. 23, 1942.

**Prisons:** Japan's Prison Island for Americans, May 4, 1942 (Geo-Graphic Brevity).

**Additional ill.: Ile Royale, French Guiana, Feb. 23, 1942.**

**Pyramids and Tribes:** Ill.: Pyramids of Giza, Egypt, Oct. 3, 1942.

**Races and Tribes:** Fighting Igorots of the Philippines, Mar. 16, 1942.

Gold and Savages on New Guinea, World's Second Largest Island, 3 ills., Mar. 30, 1942.

Oddities of Tunisia, Jan. 4, 1943.

People of Pacified Papua, New Guinea's Southeast Quarter, 2 ills., Feb. 15, 1943.

Varied Peoples of India, 3 ills., Apr. 20, 1942.

**Additional ills.: Aleuts, Aleutian Islands, May 11, 1942; Oct. 19, 1942. Arabs: Libia, Jan. 11, 1943; Pearl divers, Bahrain Islands, Nov. 2, 1942; Copts, Eritrea, Oct. 19, 1942. Chinese (2 ills.), Nov. 16, 1942; Filipinos, Hawaii, Nov. 23, 1942; Koreans, Nov. 9, 1942. Moslems: Tunisia, May 4, 1942; Moslem children, Delhi, India, Jan. 18, 1943; Nashi priests, China, Feb. 1, 1943. Natives: Spreading vanilla seed pods, Tahiti, Feb. 23, 1942; On outrigger canoe, Marshall Islands, Mar. 2, 1942; Carrying pig, Bali, Mar. 9, 1942; Children in doorway of home, Cameroons, Africa, Mar. 9, 1942; Woman making pottery, Belgian Congo, Mar. 23, 1942; Fishing under water, Sulu Archipelago, Mar. 23, 1942; Solomon Islands, Oct. 5, 1942; (2 ills.) Nov. 9, 1942; Medicine man, Madagascar, Oct. 12, 1942; Fiji Islanders, Nov. 23, 1942; Carrying sacks of peanuts, Dakar, Sénég, Dec. 14, 1942; New Guinea, Mar. 30, 1942; Jan. 4, 1943. Thailand family eating rice, Apr. 20, 1942.**

*See also* Indians.

**Religions:** Bombs May Disturb Strange Parsi Funeral Rites, Nov. 2, 1942 (Geo-Graphic Brevity).

Varied Peoples of India, 3 ills., Apr. 20, 1942.

**Additional ill.: Buddhist Painting Caves, Burma, Mar. 23, 1942; Wooden idols with pig jawbones, New Hebrides, Dec. 14, 1942; Moslem children wearing fezzes, Delhi, India, Jan. 18, 1943; Nashi priests dancing before religious banners on outdoor altar, China, Feb. 1, 1943.**

**Sailors:** Ills.: Sailors and marines, Nov. 9, 1942; U. S. sailors, Shanghai, China, Nov. 16, 1942.

**Sculpture:** Ills.: Jaguar altar, Mexico, Mar. 16, 1942; Carved marble interior of Jain temple, Rajputana, India, Apr. 20, 1942; Sphinx, Egypt, Oct. 5, 1942; Columns of ancient temple and carved figure, Mexico, Nov. 2, 1942; Ancient carved-stone statue, Colombia, Feb. 8, 1943.

**Sewing Machine:** Ill.: Boy playing with sewing machine, Djibouti, French Somaliland, Jan. 25, 1943.

**Manganese:** Strategic Materials (No. 11): Manganese by the Spoonful for Steel, May 4, 1942.

**Markets and Vendors:** Ills.: Hat vendor, Ecuador, Nov. 16, 1942; Fez, Morocco, Dec. 7, 1942; Arabs, Bengasi, Libya, Jan. 11, 1943; Olive oil peddler with burro, Lisbon, Portugal, Jan. 4, 1943; Meat market, Tripoli, Libya, Jan. 18, 1943.  
*See also* Bazaars.

**Maté:** Ills.: Gaucho drinking maté, Argentina, Dec. 7, 1942; Smoking yerba maté leaves, Paraguay, Jan. 11, 1943.

**Metals:** Strategic Materials from Latin America Aid U. S. War Economy, May 18, 1942.  
*See also* Aluminum, Copper, Gold, Iron and Steel, Manganese, Nickel, Platinum, Silver, and Tin.

**Milk:** See also Aluminum, Copper, Gold, Iron and Steel, Manganese, Nickel, Platinum, Silver, and Tin.

**Mines and Minerals:** Americans in New Caledonia Are Far from Home, May 18, 1942.

Cornwall's Tin "Pixies" to Help United Nations, 1 ill., Oct. 5, 1942 (Geo-Graphic Brevity).

Mountain-Tiered Bolivia, Mineral War Chest, 2 ill., 1 map, Jan. 18, 1943.

Ribbon-Shaped Chile, the Three-in-One Republic, 2 ill., 1 map, Dec. 14, 1942.

Strategic Materials from Latin America Aid U. S. War Economy, May 18, 1942.

Yunnan, China's Back Door Province of Mines and Magic, Feb. 1, 1943.

Additional ill.: Copper mine, Chile, Mar. 23, 1942.

*See also* Celestite, Diamonds, Graphite, Metals, and Quartz crystal.

**Molasses:** Ill.: Pulling barrel of molasses on "spider," Barbados, Feb. 1, 1943.

**Nickel:** War Takes Nickel out of "Nickel," Pinches Pennies, Mar. 30, 1942.

**Oil:** Gasoline a Young Problem Child of Old Oil Industry, Jan. 25, 1943 (Geo-Graphic Brevity).

Oil-Thirsty Australia Reaches Across Oceans for Fuel, Feb. 8, 1943 (Geo-Graphic Brevity).

Petroleum Is a Stake in Burma, Apr. 27, 1942 (Geo-Graphic Brevity).

Russian Oil, Magnet of the Caucasus, Oct. 5, 1942.

Santa Elena Peninsula in Ecuador's Oil Area, New U. S. Base, Nov. 16, 1942.

Additional ill.: Oil geologist, New Guinea, Nov. 16, 1942.  
*See also* Transportation: Pipe Lines.

**Paper:** Waste Paper Goes to War, Apr. 27, 1942.

Additional ill.: Planting pineapples in paper, Hawaii, Apr. 13, 1942.

**Peanuts:** Peanut Volunteer for Front-Line Duty, Apr. 27, 1942.

Additional ill.: Native carrying sack of peanuts, Dakar, Sénégal, Dec. 14, 1942.

**Pigs:** Old Paint Brushes Stay on Job as Bristle Imports Stop, Nov. 16, 1942.

Additional ill.: Native carrying pig, Bali, Mar. 9, 1942; Pigs on Iowa farm, Nov. 16, 1942; Idols wearing jawbones of pigs, New Hebrides, Dec. 14, 1942.

**Pineapples:** Ill.: Planting in paper, Hawaii, Apr. 13, 1942.

**Plastics:** Casein Can Make Miss Muffet a Modern Glamor Girl, Jan. 11, 1943.

**Platinum:** Ill.: Nuggets, Apr. 20, 1942.

**Power Plants:** Ill.: Power plant, Lake of Garda, Italy, Jan. 25, 1943.

**Priorities:** Priorities That Geography Built, 2 ill., Mar. 23, 1942.  
*See also* Industrial.

**Quartz Crystal:** Strategic Materials (No. 12): Quartz Crystal, Robot Boss of Radio, 2 ill., May 11, 1942.

**Rayon:** Conservation from Head to Heel Saves Clothing from Afar, Mar. 9, 1942.

**Rice:** Japan Now Controls the Orient's Export Rice, 1 ill., Apr. 20, 1942 (Geo-Graphic Brevity).

**Rubber:** Rubber Bond Cements Pan American Relations, 2 ill., Apr. 13, 1942.

**Salt:** Ill.: Natives carrying salt, Eritrea, Oct. 19, 1942.

**Sheep and Sheep Raising:** Ills.: Earmarking sheep, Argentina, Mar. 9, 1942; Shepherds, Caucasus Mountains, Nov. 23, 1942; Drying sheepskins, Chile, Dec. 14, 1942.  
*See also* Peoples and Cultures: Shepherds.

**Silk:** Silk Salvage Completes a Stocking Cycle, Nov. 30, 1942.

**Silver:** War Takes Nickel out of "Nickel," Pinches Pennies, Mar. 30, 1942.

**Steel:** See Iron and Steel.

**Sugar:** War Drafts Sugar for Double Duty, 2 ill., Mar. 9, 1942.

**Tea:** Ceylon, Where Japanese Threaten World's Tea Chest, 2 ill., Apr. 27, 1942.

**Tin:** Teakettles Sing Around the World in Spite of War, Apr. 20, 1942.

Cornwall's Tin "Pixies" to Help United Nations, 1 ill., Oct. 5, 1942 (Geo-Graphic Brevity).

Tin Can: A Trash-to-Treasure Success Story, Apr. 13, 1942.

Additional ill.: Drilling for tin ore, Bolivia, May 18, 1942; Women sorting tin ore, Bolivia, Jan. 18, 1943.

**Vanilla:** Ills.: Native spreading seed pods, Tahiti, Feb. 23, 1942; Vanilla vine, Oct. 12, 1942.

**Wool:** Conservation from Head to Heel Saves Clothing from Afar, Mar. 9, 1942.

## PEOPLES AND CULTURES

**General:** Scientists Keep Digging in 1942, Jan. 18, 1943.

**Altars:** Ills.: Jaguar altar, Mexico, Mar. 16, 1942; Nashi priests dancing before outdoor altar, China, Feb. 1, 1943.

**Archeology:** Mysteries of Ancient American History Solved, 2 ill., Mar. 16, 1942.

Scientists Kept Digging in 1942, Jan. 18, 1943.

Additional ill.: Temple columns and carved figure, Mexico, Nov. 2, 1942; Ancient carved-stone statue, Colombia, Feb. 8, 1943.

**Beauty Shops:** Ill.: Street beauty shops, Hong Kong, Nov. 16, 1942.

**Castles and Palaces:** Ills.: Georgian castle, Caucasus Mountains, Nov. 23, 1942; Norman castle, Dover, England, Apr. 27, 1942.

**Children:** Ills.: Aleut children, Aleutian Islands, May 11, 1942; Oct. 19, 1942. Boy playing with sewing machine, Djibouti, French Somaliland, Jan. 25, 1943. Child in underground home, Tunisia, Jan. 4, 1943. Chinese children, Nov. 16, 1942. Family eating rice, Thailand, Apr. 20, 1942. Indian children: Aymará Indian baby, Bolivia, Jan. 18, 1943; Indian baby dressed up in parka, Yukon, Apr. 27, 1942. Korean children, Nov. 9, 1942. Moslem children wearing fezzes, Delhi, India, Jan. 18, 1943. Native children: Boy opening coconut, Apataki Island, Mar. 23, 1942; In doorway of home, Cameroons, Africa, Mar. 9, 1942; New Caledonia, May 18, 1942; New Hebrides, Dec. 14, 1942; Sumatra, Mar. 2, 1942. Russian school children, Oct. 12, 1942.

**Churches, Mosques, and Temples:** Ills.: Cave temple, Painga Caves, Burma, Mar. 23, 1942; Temple attendant, Benares, India, Apr. 20, 1942; Interior of Jain temple, Rajputana, India, Apr. 20, 1942; Ancient temple, Mexico, Nov. 2, 1942; Interior of cathedral, Trondheim, Norway, Nov. 2, 1942.

**Coins:** War Takes Nickel out of "Nickel," Pinches Pennies, Mar. 30, 1942.

Additional ill.: Ancient money in shape of fishhooks, nails, rings, and tree, Mar. 30, 1942.

**Commandos:** Commandos Raid Channel Steppingstone, Isle of San, Nov. 2, 1942.

Dieppe Was Geography Protocol for Commandos, Oct. 5, 1942 (Geo-Graphic Brevity).

**Costumes and Clothing:** Casein Can Make Miss Muffet a Modern Glamor Girl, Jan. 11, 1943.

Conservation from Head to Heel Saves Clothing from Afar, Mar. 9, 1942.

Sikhs Had a Word for It, Khaki, 1 ill., Jan. 4, 1943 (Geo-Graphic Brevity).

Silk Salvage Completes a Stocking Cycle, Nov. 30, 1942.

Veils for Moslem Women Still Important in North Africa, 1 ill., Dec. 7, 1942 (Geo-Graphic Brevity).

Additional ill.: Steaming Cadets, Randolph Field, Texas, May 18, 1942. Hair arrangements: Natives, New Guinea, Jan. 4, 1943; Natives wearing fishnet hairnet, New Guinea, Mar. 30, 1942. Hats: Hat vendor, Ecuador, Mar. 16, 1942; Women mine workers wearing straw hats, Bolivia, Jan. 18, 1943; Native wearing bamboo hat, Bali, Mar. 9, 1942; Highlanders, Eritrea, Oct. 19, 1942. Indians: Tehuano Indians, Mexico, Apr. 20, 1942; Indian baby dressed up in parka, Yukon, Apr. 27, 1942. Moslems: Moslem children wearing fezzes, Delhi, India, Jan. 18, 1943; Moslems wearing burnous, Tunisia, May 4, 1942; Negroes in Moslem dress, Libia, Jan. 18, 1943. Natives' dress: Native girl wearing *fambo*, Madagascar, Oct. 12, 1942; Native girls wearing tapa cloth *sulus* (sarongs), Fiji Islands, Nov. 23, 1942; Grass skirts, Marshall Islands, Mar. 2, 1942. Phoenician women, Levant

**Shepherds:** Ills.: Peruvian shepherdess, Mar. 2, 1942; Ingush shepherds, Caucasus Mountains, Nov. 23, 1942; Shepherd wearing poncho, Bolivia, Jan. 18, 1943.

**Soldiers:** Ills.: Cadets drilling, Japan, Apr. 13, 1942; Soldiers from India, Egypt, Oct. 5, 1942; Chinese soldiers, Hangchow, China, Oct. 19, 1942; U. S. soldiers and tank, Nov. 23, 1942.  
*See also* Commandos.

**Sports and Games:** Ills.: Skiing, Mt. Buffalo, Australia, Mar. 16, 1942; Mountain climbing, Caucasus Mountains, Nov. 2, 1942.

**Tombs:** Ill.: Unearthing stockade tomb, La Venta, Mexico, Jan. 18, 1943.

**Toys:** Ills.: Rubber toys in Walt Disney characters, Apr. 13, 1942; Toy Mexican straw horse, Dec. 14, 1942.

**Vitamins:** ABC's of Vitamins for Victory, May 4, 1942.

**War Booms:** Shark Fishing, 1 ill., Oct. 19, 1942 (Geo-Graphic Brevity).

**Weapons:** Ills.: Igorot spear and head ax, Philippine Islands, Mar. 16, 1942; Natives with bows and arrows, New Guinea, Mar. 30, 1942.  
*See also* Guns, and Commerce, Industry, and Agriculture: Ammunition.

**Wells:** Ill.: Native sinking well in desert, French Equatorial Africa, Jan. 11, 1943.

**Women War Workers:** Women at Work: How Aunt America Helps Uncle Sam Fight, 2 ill., May 11, 1942.

#### NATURAL HISTORY

**Animals:** Madagascar Landscape a Freak Show of Nature, 2 ill., Oct. 12, 1942.  
 Old Paint Brushes Stay on Job as Bristle Imports Stop, Nov. 16, 1942.  
 Additional ill.: Dogs: In jungle village, Sumatra, Mar. 2, 1942; Argentina, Dec. 7, 1942. Llamas, Peru, Mar. 2, 1942; Jan. 25, 1943. Native carrying pig, Bali, Mar. 9, 1942; Camels, Fezzan, Mar. 30, 1942; Caribou swimming Yukon River; Snake charmer with cobra and mongoose, Ceylon, Apr. 27, 1942; Turtle, Galapagos Islands, Oct. 12, 1942; Horses and cows in sight of outdoor class in agriculture, U. S. S. R., Jan. 11, 1943; Meat market, Tripoli, Libya, Jan. 18, 1943; Ocelot, Ecuador, Feb. 1, 1943.  
*See also* Commerce, Industry, and Agriculture: Pigs; Sheep and sheep raising; and Transportation: Animals.

**Birds:** Ills.: Sheep-eating parrot (*keo*), New Zealand, Apr. 13, 1942; Packing baby chicks in paper cartons, Virginia, Apr. 27, 1942; Natives with cassowary, Papua, Feb. 15, 1943.

**Cacti:** Ills.: Giant cardon cacti, Baja, California, Mar. 9, 1942; Cacti, Galapagos Islands, Oct. 12, 1942.  
*See* Commerce, Industry, and Agriculture: Fish and Fishing.

**Fish:** Ills.: Native boy opening coconut, Apataki Island, Mar. 23, 1942; Grapefruit tree, May 4, 1942; Fruit cluster of oil palm, Oct. 26, 1942.

**Fruit:** Ills.: Native boy opening coconut, Apataki Island, Mar. 23, 1942; Grapefruit tree, May 4, 1942; Fruit cluster of oil palm, Oct. 26, 1942.

**Trees:** See also Commerce, Industry, and Agriculture: Bananas, and Pineapples.  
 Madagascar Landscape a Freak Show of Nature, 2 ill., Oct. 12, 1942.  
 Additional ill.: Tree ferns, Hawaii, Apr. 13, 1942; Grapefruit tree, Texas, May 4, 1942; Cacao tree, Oct. 12, 1942; Fruit cluster of oil palm, Oct. 26, 1942; Balata tree, Nov. 30, 1942; Orange trees with protection against ants, Brazil, Nov. 30, 1942; Date palms, Tunisia, Dec. 14, 1942; Banana trees, Panama, Feb. 1, 1943; preparing sago flour from sago palm, Papua, Feb. 15, 1943.

#### PHYSICAL GEOGRAPHY

**Caves:** Ill.: Cave temple, Paingu Caves, Burma, Mar. 23, 1942.

**Cliffs:** Ills.: North Cape, Norway, Oct. 19, 1942; Channel Islands, Nov. 2, 1942; Owen Stanley Mountains, New Guinea, Oct. 26, 1942.

**Deserts:** Exploring French North Africa's Desert Reaches, Dec. 7, 1942.  
 Libian Desert Dwellers Plug Noses Against the Khamsin, 1 ill., May 11, 1942 (Geo-Graphic Brevity).  
 Additional ill.: Couriers for British forces, North Africa, Jan. 4, 1943; Native sinking well in desert, French Equatorial Africa, Jan. 11, 1943.

**Glacier:** Chalaat Glacier, Caucasus Mountains, Nov. 2, 1942.

**Lakes:** Chad, Mid-African French Colony, Named for "Breathing" Lake, Jan. 11, 1943.  
 Exploring French North Africa's Desert Reaches, Dec. 7, 1942.  
 Additional ill.: Lake Patzcuaro, Mexico, Mar. 2, 1942; Lake of Garda, Italy, Jan. 25, 1943.

**Lava:** Ill.: Lava mounds, Galapagos Islands, Oct. 12, 1942.

**Mountains:** Frosty Caucasus Wall, Russia's Mountain Rampart, 2 ill., Nov. 2, 1942.  
 Owen Stanley Mountains a Jungle Battleground, Oct. 26, 1942.  
 Additional ill.: Andes Mountains: Copper mine, Mar. 23, 1942; Peru, Jan. 25, 1943; Peak of Ausangate, Peru, Mar. 2, 1942; Himalayan Asia, Mar. 16, 1942; Mount Kazbek, Caucasus Mountains, Nov. 23, 1942; Toros Mountains, Turkey, Feb. 15, 1943.

**Oases:** Ills.: Fergana, Lithuania, Mar. 30, 1942; Meat market, Tripoli, Libya, Jan. 18, 1943.

**Rain Forest:** Ill.: New Guinea, Nov. 16, 1942.

**Rivers:** Egypt: An Innocent Bystander Embroiled (Nile River), 2 ill., 1 map, Oct. 5, 1942.  
 St. Lawrence Waters Exceed Great Lakes in Area, 1 ill., Nov. 9, 1942 (Geo-Graphic Brevity).  
 Additional ill.: Salween River gorge through Himalayas, Mar. 16, 1942; Caribou swimming Yukon River, Apr. 27, 1942; Fuji River, Japan, May 18, 1942; Laloki River waterfalls, New Guinea, Oct. 26, 1942; Angara River, U. S. S. R., Oct. 26, 1942; Sepik River, New Guinea, Nov. 16, 1942; Ziz River, Morocco, Dec. 7, 1942.  
*See also* Transportation: Rivers.  
 Snow: Riddle of Snowfall Teases Weather Hobbyists, 1 ill., Feb. 8, 1943 (Geo-Graphic Brevity).  
 Volcanoes: Ecuador: Equator Land of Ice and Volcanic Fire, 2 ill., 1 map, Feb. 1, 1943.  
 Additional ill.: Mount Fuji, Japan, May 18, 1942.

**Waterfalls:** Ill.: Rona Falls, New Guinea, Oct. 26, 1942.  
 Exploring French North Africa's Desert Reaches, Dec. 7, 1942.  
 Flat Russia's Winter Sweeps Far South, Oct. 26, 1942.  
 Oddities of Tunisia, Jan. 4, 1943.

**Weather:** Rain Hampers Both Sides in New Guinea Battles, Nov. 16, 1942.  
 Riddle of Snowfall Teases Weather Hobbyists, 1 ill., Feb. 8, 1943 (Geo-Graphic Brevity).  
*See also* Winds.

**Winds:** Libian Desert Dwellers Plug Noses Against the Khamsin, 1 ill., May 11, 1942 (Geo-Graphic Brevity).  
 Monsoon Lords It over Asiatic Battlefields, 1 ill., May 18, 1942 (Geo-Graphic Brevity).

#### SCIENCE

**Chemistry:** Casein Can Make Miss Muffet a Modern Glamor Girl, Jan. 11, 1943.

**Engineering:** World War Spurs Building and Manufacturing in 1942, Jan. 18, 1943.

**Machinery, Instruments, Etc.:** Graphite for Writing and Fighting, Jan. 25, 1943.  
 Women at Work: How Aunt America Helps Uncle Sam, 2 ill., May 11, 1942.  
 Additional ill.: Manganese steel in drop forge, May 4, 1942; "Burner" using acetylene torch, Oct. 5, 1942; Oil geologist surveying, New Guinea, Nov. 16, 1942.

**Radio:** Strategic Materials (No. 12): Quartz Crystal, Robot Boss of Radio, 2 ill., May 11, 1942.

